

ABSTRACT OF THE DISCLOSURE

A gas chromatograph in which the substances of a substance mixture that is to be analyzed are separated in a separation device and are detected in a detector device. An evaluation device (10) provides a result (11) in the form of a quantitative determination of given substances depending on the detector signals. To obtain a relatively rapid analysis result, an additional detector device (13), which generates additional detector signals (16) based on the substances that at this stage have not been completely separated, is located in the path of the separation device (6). A computational unit (18) provides a quantitative determination of at least one part of the given substances as a further result (20), based on the additional detector signals (16). This somewhat imprecise but rapid result can be used for rapid control or regulatory interventions in a process (4). The computational precision of the computational unit (18) can be adaptively improved, based on the result of the evaluation device (10) which is more precise but takes longer to obtain.